SUMMARY

The somatic chromosomes of fifty races representing eight species of the genus *Tragopogon* are described and figured. Although there is much in common between the chromosome sets of the different species, most species can be recognized by the morphology of the chromosomes. Even within a single species, however, considerable chromosomal variability occurs among different races. The chromosome number was found to be $2n = 12$ in the following species: *T. cupani* (3 races), *T. dubius* (17 races), *T. longirostris* (1 race), *T. orientalis* (4 races), *T. porrifolius* (10 races), and *T. pratensis* (9 races). In *T. mirus* and *T. miscellus*, it is $2n = 24$. The origin of *T. mirus* through hybridization and amphiploidy between *T. dubius* and *T. porrifolius* is confirmed by its chromosome morphology, as is the origin of *T. miscellus* through hybridization and amphiploidy between *T. dubius* and *T. pratensis*. The independent origin of the three known races of *T. mirus* also is confirmed by chromosomal evidence.—STATE COLLEGE OF WASHINGTON, PULLMAN.

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A New Species of Carex (Section Phyllostachyae) from Oklahoma.—In the spring of 1951 a peculiar species of Carex was collected by the author in the Ouachita Mountains of southeastern Oklahoma. Although too immature for determination, it obviously belonged to the section Phyllostachyae since the lower pistillate bracts were broad and leaflike, exceeding the inflorescence, and the staminate scales of the single androgynous

spike were basally united. The following spring a student, Walter Blinn, collected a sheet of the same species in Beaver Bend State Park, about 12 miles southeast of the find of the preceding year. In the spring of 1953 the author found abundant material near the site of his original collection.

The proposed new species differs from *C. Willdenowii* Schkuhr and *C. Jamesii* Schwein. in having broad leaf-like lower pistillate bracts which conceal the perigynia. It is, therefore, more nearly related to the remaining two species of this section, *C. Backii* Boott and *C. saximontana* Mackenzie. The former species has all the pistillate scales leaf-like according to Mackenzie.[1] This is not the case in the new species. *C. saximontana* has 2 or 3 enlarged, leaf-like, lower pistillate bracts, 0.7–3.5 cm. long and 2–6 mm. wide, with the upper ones scale-like and shorter than the perigynia; the perigynia are 2–5 in number, 4 mm. long and 2 mm. broad, with the body 2.5–3 mm. long and the beak about 1 mm. long; the orifice is entire and truncate; the staminate part of the spike is about 3 mm. long and 0.5–1 mm. wide, consisting of about 3 flowers. In the new species there are 5 flat leaf-like pistillate bracts. The outermost (and lowest) of these is 4–5.5 cm. long, and 4–10 mm. wide; the succeeding ones become progressively smaller, until the fifth one may be no more than 15 mm. long and 1.5–3 mm. wide, barely exceeding the style in length, and sometimes narrower than the perigynium. The remaining 2 or 3 pistillate scales are short, one-half to one-third the length of the body of the perigynium; the lower ones are broadly oblong, the upper almost orbicular. These shorter, upper pistillate scales are papery and whitish, with a brown line extending around them about 0.5–0.7 mm. inside their margins. The perigynia are 7–9 in number, some of the lower ones often not developing. The length of the perigynia is 8–9 mm.; their bodies are about 5 mm. long and 2.5 mm. thick; their beaks are 3–4 mm. long, the upper 2.5–3 mm. of them being about 0.5 mm. wide. The orifice is adaxially truncate, to rounded, to minutely retuse; abaxially it has a narrow v-shaped slit 1.2–2 mm. long; the style is about 7 mm. long. The staminate part of the spike is about 4–5 mm. long and 2 mm. wide; it is 4–5-flowered. This taxon, then, is described as a new species.

[1] Mackenzie, Kenneth Kent. *Cariceae*, N. Amer. Flora 18: 176–177. 1935.

Carex latebracteata Waterfall, sp. nov., *C. saximontana* simillima; 5 bracteis foemineis inferioribus latis, planis; bracteis infimis 4.5–5 cm. longis, 4–10 mm. latis; 4 bracteis inferioribus proximis parvioribus; 2–3 bracteis foemineis superioribus 3–4 mm. longis, lato-oblongis vel orbiculatis; perigyniis 8–9 mm. longis, corpus ca. 5 mm. longum et 2.5 mm. latum, rostrum 3–4 mm. longum; orificio rostri oblique secto 1.2–2 mm. alto; partibus spicae superioribus masculinis 4–5 floribus, 4–5 mm. longis et ca. 2 mm. latis; seminibus 4 mm. longis et ca. 2.5 mm. latis.

C. latebracteata can easily be differentiated from *C. saximontana* by the larger, broader, more numerous lower leaf-like pistillate scales, by the larger perigynia which have an orifice with a v-shaped slit extending down one side of the rostrum of each one, and by the larger staminate part of the spike which has more flowers. The TYPE is *Waterfall 11380*, on the east side of a rocky wooded ridge, 16.4 miles north of Broken Bow, McCurtain County, April 19, 1953. It is deposited in the Herbarium of Oklahoma A. and M. College. ISOTYPES will be sent to the Gray Herbarium, the New York Botanical Garden and the Missouri Botanical Garden. Additional material seen includes *Blinn 43*, rocky wooded hillside, one-fourth mile west of Beaver Bend State Park, McCurtain Co., April 25, 1952.

C. saximontana (according to Mackenzie, l. c.) extends from Manitoba to western Nebraska and British Columbia to Colorado. *C. latebracteata* is, at present, known only from the Ouachita Mountains of southeastern Oklahoma. It grows on rather steep slopes in rich woods, not on open xeric slopes, and is usually found in cracks or depressions where rich soil and humus have accumulated.—U. T. Waterfall, department of botany and research foundation, oklahoma a. & m. college, stillwater, okla.

Putty-root and Lesser Celandine in Western Pennsylvania.—On April 4, 1953, I made an early field trip to a spot along Ten-Mile Creek, three miles east of Waynesburg, Greene County, in Southwestern Pennsylvania, to check on winter leaves of some plants of Putty-root (*Aplectrum hyemale* (Muhl.) Torr. which we had found the previous spring, but which had failed to bloom. There were 22 winter leaves showing, but only one of the plants subsequently bloomed. In